



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/661,625	09/14/2000	Lars Adolfsson	031941-079	8710

37825 7590 02/20/2004

ERICSSON INC.  
6300 LEGACY DRIVE  
M/S EVR C11  
PLANO, TX 75024

EXAMINER

KAPADIA, MILAN S

ART UNIT PAPER NUMBER

2144

DATE MAILED: 02/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/661,625

Applicant(s)

ADOLFSSON, LARS

Examiner

Milan S Kapadia

Art Unit

2143

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 September 2000.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-46 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-46 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Notice to Applicant**

1. This communication is in response to the application filed 14 September 2000. Claims 24-46 are pending.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 24-32 and 40-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al. (5,241,682) in view of Natarjan et al. (5,654,958) and further in view of Nilakantan et al. (5,541,911).

(A) As per claim 24 Bryant teaches an arrangement for monitoring and managing routing in a communications network comprising:

at least one routing domain having at least one routing area that includes a plurality of network nodes that intercommunicate using transmission links (Bryant; abstract); and

at least one routing controlling device coupled to at least one network node of a routing area and part of a link state routing process for the routing areas to which the at least one network node belongs (Bryant; abstract; the Examiner interprets the “border node” as a form of “routing controlling device”)

Bryant fails to expressly teach administrating means for administering the at least one routing domain using a link state protocol, a link state database maintained by the routing, controlling device for computing an optimal transmission path between network nodes in the at least one routing domain, and means for injecting routing information from the at least one routing controlling device into the link state routing, process, for generating, at each of the network nodes that are part of the link state routing process, link state databases that are identical to the link state database maintained by the at least one routing controlling device. However, this feature is old and well known in the art, as evidenced by Natarjan’s teachings with regards to administrating, means for administering the at least one routing domain using a link state protocol (Natarjan; abstract), a link state database maintained by the routing, controlling device for computing an optimal transmission path between network nodes in the at least one routing domain (Natarjan; abstract; the Examiner interprets the center node to be the controlling device), , and means for injecting routing information from the at least one routing controlling device into the link state routing, process, for generating, at each of the network nodes that are part of the link state routing process, link state databases that are identical to the link state database maintained by the at least one routing controlling device (Natarjan; abstract). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the system taught by Bryant with Natarjan’s teaching with

Art Unit: 2143

regards to this limitation, with the motivation of reducing link failures by using a well-known dynamic routing technique (Natarjan; col. 1, line 53-col. 2, line 4).

The combined system of Bryant and Natarjan collectively fail to expressly teach means for rejecting non-routing information and traffic presented at the at least one routing controlling device. However, this feature is old and well known in the art, as evidenced by Nilakantan's teachings with regards to means for rejecting non-routing information and traffic presented at the at least one routing controlling device (Nilakantan; abstract and col. 4, line 38-col.5, line 14; the Examiner interprets the central node as the routing control device). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by Bryant and Natarjan with Nilakantan's teaching with regards to this limitation, with the motivation of realizing significant bandwidth savings (Nilakantan; col. 10, lines 60-65).

(B) As per claims 25 and 26, Bryant teaches wherein there exists a routing controlling device for each routing area and wherein the at least one routing controlling device belongs to more than one routing area (Bryant; abstract).

(C) As per claim 27, Bryant teaches wherein a routing domain comprises more than one routing area (Bryant; abstract).

(D) As per claim 28, the combined system of Bryant and NilaKantan collectively fail to expressly teach wherein the means for injecting routing information injects link state database

Art Unit: 2143

records of a respective link state routing process into the link state processes of all the routing areas to which the at least one routing control device belongs. However, this feature is old and well known in the art, as evidenced by Natarjan's teachings with regards to wherein the means for injecting routing information injects link state database records of a respective link state routing process into the link state processes of all the routing areas to which the at least one routing control device belongs (Natarjan; abstract). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by Bryant and Nilakantan with Natarjan's teaching with regards to this limitation, with the motivation of reducing link failures by using a well-known dynamic routing technique (Natarjan; col. 1, line 53-col. 2, line 4).

(E) As per claim 29, the combined system of Bryant and Natarjan collectively fail to expressly teach wherein a routing control device is connected to only one network of the routing areas to which the routing control device belongs. However, this feature is old and well known in the art, as evidenced by Nilakantan's teachings with regards to wherein a routing control device is connected to only one network of the routing areas to which the routing control device belongs (Nilakantan; abstract and figure 1). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by Bryant and Natarjan with Nilakantan's teaching with regards to this limitation, with the motivation of realizing significant bandwidth savings (Nilakantan; col. 10, lines 60-65).

Art Unit: 2143

(F) As per claim 30, Bryant teaches wherein the routing control device is connected to more than one network node of the routing areas to which the routing control device belongs (Bryant; abstract).

(G) As per claim 31, the combined system of Bryant and NilaKantan collectively fail to expressly teach wherein the at least one routing controlling device monitors and manages updates and changes in the network nodes of the routing areas to which at least on routing control device belongs. However, this feature is old and well known in the art, as evidenced by Natarjan's teachings with regards to wherein the at least one routing controlling device monitors and manages updates and changes in the network nodes of the routing areas to which at least on routing control device belongs (Natarjan; abstract). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by Bryant and Nilakantan with Natarjan's teaching with regards to this limitation, with the motivation of reducing link failures by using a well-known dynamic routing technique (Natarjan; col. 1, line 53-col. 2, line 4).

(H) As per claim 32, Bryant teaches wherein a routing controlling device simulates the network nodes of the routing areas to which the routing control device belongs when injecting messages into a routing process when a link change occurs, such that the messages appear to be issued by a network node for purposes of fulfilling a used protocol and such that the messages are accepted by the network nodes (Bryant; abstract).

Art Unit: 2143

(I) Claims 40-44 repeat the features of claims 24, 25, 28, 32, and 31, respectively and are therefore rejected for the same reasons given above for the rejection of claims 24, 25, 28, 31, and 32.

4. Claims 33-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al. (5,241,682), Natarjan et al. (5,654,958) and Nilakantan et al. (5,541,911) as applied to claim 24 above and further in view of official notice.

(A) As per claims 33 and 35-36, the combined system of Bryant, Natarjan and Nilakantan collectively fail to expressly teach wherein the communications network is the Internet, the link state protocol is the Open Shortest Path First, and where the administering means is and Internet Service Provider. However, the Examiner takes Official Notice (see MPEP § 2144.03) that the Internet, the Open Shortest Path First form of link state protocol and an ISP for administering a network service in a computer networking environment was well known in the art at the time the invention was made. The Applicant is entitled to traverse any/all official notice taken in this action according to MPEP § 2144.03. However, MPEP § 2144.03 further states "See also In re Boon, 439 F.2d 724, 169 USPQ 231 (CCPA 1971) (a challenge to the taking of judicial notice must contain adequate information or argument to create on its face a reasonable doubt regarding the circumstances justifying the judicial notice)." Specifically, In re Boon, 169 USPQ 231, 234 states "as we held in Ahlert, an applicant must be given the opportunity to challenge either the correctness of the fact asserted or the notoriety or repute of the reference cited in support of the assertion. We did not mean to imply by this statement that a bald challenge, with nothing more,



Art Unit: 2143

would be all that was needed". Further note that 37 CFR § 1.671(c)(3) states "Judicial notice means official notice". Thus, a traversal by the Applicant that is merely "a bald challenge, with nothing more" will be given very little weight.

Thus, it is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to provide the routing as taught by Bryant, Natarjan and Nilakantan using the Internet, the Open Shortest Path First link state protocol, and ISO as the administering means, , with the motivation of providing the routing service by utilizing and taking advantage of well-known networking technologies and services.

(B) As per claim 34, Bryant teaches wherein at least one of the network nodes is a router (Bryant; abstract).

5. Claims 37-39 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant et al. (5,241,682), Natarjan et al. (5,654,958), Nilakantan et al. (5,541,911) and official notice as applied to claims 24 and 33 above and further in view of Iwata (5,687,168).

(A) As per claims 37-39, the combined system of Bryant, Natarjan, Nilakantan, and official notice collectively fail to expressly teach wherein the link state routing protocol comprises a link state update protocol and a link state acknowledgement protocol for ensuring that all network nodes send Link State Acknowledgments to each other, and that the network nodes employ an algorithm to determine a shortest path through the network for transmitting packets and messages, wherein the at least one routing controlling device transforms network change within a

Art Unit: 2143

corresponding area into LSA records by manipulating LSA records in the link state database, the manipulated LSA records then being flooded throughout the respective routing areas, and wherein the communications network is an ATM network, the network nodes include switches, and the link state protocol is a Private Network to Network Interface belongs. However, this feature is old and well known in the art, as evidenced by Iwata's teachings with regards to wherein the link state routing protocol comprises a link state update protocol and a link state acknowledgement protocol for ensuring that all network nodes send Link State Acknowledgments to each other, and that the network nodes employ an algorithm to determine a shortest path through the network for transmitting packets and messages (Iwata; abstract), wherein the at least one routing controlling device transforms network change within a corresponding area into LSA records by manipulating LSA records in the link state database, the manipulated LSA records then being flooded throughout the respective routing areas (Iwata; abstract), wherein the communications network is an ATM network (Iwata; col. 3, line 65-col. 4, line 4), the network nodes include switches, and the link state protocol is a Private Network to Network Interface belongs (Iwata; abstract). It is respectfully submitted, that it would have been obvious, to one having ordinary skill in the art at the time the invention was made, to expand the collective system taught by Bryant, Nilakantan, Natarjan and official notice with Iwata's teaching with regards to this limitation, with the motivation of synchronizing the link state information across the network (Iwata; abstract).

(B) Method claims 45 and 46 repeat the subject matter of system claims 38, as a series

Art Unit: 2143

of steps rather than a set of apparatus elements. As the underlying structure of claim 38 has been shown to be fully disclosed by the teachings of Bryant, Nilakantan, Natarjan, official notice, and Iwata in the above rejections of claim 38, it is readily apparent that the system disclosed by Bryant, Nilakantan, Natarjan, official notice, and Iwata include the steps to perform these functions. As such, these limitations are rejected for the same reasons given above for system claim 38, and incorporated herein.

### *Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited but not applied art teaches updating link state information network (5,128,926); a system for extending network resources to remote networks (5,423,002)); management of path routing in packet communications networks (5,987,521); dynamic algorithms for shortest path tree computation (6,098,107); and a system for generating explicit routing advertisements to specify a selected path through a connectionless network to a destination by a specific router (5,881,246).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milan S Kapadia whose telephone number is 703-305-3887. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wiley can be reached on 703-308-5221. The fax phone numbers for the


Art Unit: 2143

organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

  
mk

January 9, 2004

  
**DAVID WILEY**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 2100**